

REMARKS

Claims 1-15 are pending in this application. By this Amendment, claim 1 is amended to address the teachings of Heller.

No new matter is added by this Amendment. The amendment to claim 1 is supported in the original specification, for example on page 4, lines 22-28.

In view of the foregoing amendments and the following remarks, reconsideration of this application is respectfully requested.

I. Rejection Under 35 U.S.C. §102(b)

Claims 1-5, 7, 10-12 and 14-15 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,194,161 ("Heller"). This rejection is respectfully traversed.

Claim 1, as amended, recites a process for the purification of water, wherein a solution containing a proportion of a mixed microbiotic culture is added to the water in an environment having catalytic activity, characterized in that, the mixed culture contains a system of photosynthetically active microorganisms and luminous bacteria in a biological solution, wherein the photosynthetically active microorganisms and the luminous bacteria interact.

Heller teaches a bead (particle) having an exterior surface that is at least partially coated with a material that under illumination and in the presence of air is capable of accelerating the oxidation of organic compounds floating on water. These coated beads are water floatable and can be used to accelerate under illumination oxidation of a floating oil film by dispersing the coated beads in the film and allowing them to be exposed to solar illumination and oxygen. Heller further teaches that the beads may be used with microbes to biodegrade oil. See Abstract of Heller.

Nowhere does Heller teach or suggest a system of photosynthetically active microorganisms and luminous bacteria in a biological solution where the photosynthetically active microorganisms and the luminous bacteria interact as recited in claim 1. In fact, Heller teaches that when the plurality of coated water floatable beads are dispersed in an oil film, they accelerate the oxidation of organic compounds in the oil film under the influence of solar illumination and in the presence of air. See Heller, column 4, lines 34-43. Heller further teaches that the beads may be used in conjunction with microbes to biodegrade organic compounds in an oil film. See Heller, column 4, lines 60-62. The microbes are used to complete the oxidation of the organic compounds. See Heller, column 4, lines 64-65.

Clearly, in Heller, the purpose of the use of mixed cultures of microorganisms such as microbes in conjunction with the coated beads is to enhance the oxidation process of the organic compounds in the oil film rather than to interact the photosynthetically active microorganisms with the luminous bacteria, as recited in instant claim 1. In addition, Heller requires that the coated beads be exposed to solar illumination and ambient air in order to accelerate the oxidation of organic compounds in the oil film. In contrast, the purpose of the interaction between the microorganisms and luminous bacteria in the microbiotic culture as recited in claim 1 is to be independent from solar illumination (sun) or air.

Furthermore, Heller does not teach or suggest that the microbiotic culture added to the water is itself a solution as recited in claim 1.

As such, the process for the purification of water as recited in claim 1 clearly distinguishes over Heller because (1) Heller requires the coated beads be exposed to solar illumination and ambient air in order to accelerate the oxidation of organic compounds in the oil film while the claimed subject matter is independent from solar illumination (sun) or air, (2) the microbes in Heller are used in conjunction with the coated beads to enhance the oxidation process of the organic compounds in the oil film rather than to interact the

photosynthetically active microorganisms with the luminous bacteria as recited in claim 1, and (3) Heller does not teach or suggest that the microbiotic culture added to the water is itself a solution as recited in claim 1.

For the foregoing reasons, Applicant respectfully submits that Heller fails to anticipate claim 1, and claims dependent therefrom.

Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

II. Rejections Under 35 U.S.C. §103(a)

A. Rejection over Heller

Claims 8, 9 and 13 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Heller. This rejection is respectfully traversed.

As discussed above, Heller does not teach, nor does Heller suggest, a system of photosynthetically active microorganisms and luminous bacteria in a biological solution where the photosynthetically active microorganisms and the luminous bacteria interact as recited in claim 1. In fact, Heller teaches way from the claimed invention by specifically requiring that the coated beads, in conjunction with the use of microbes, be exposed to solar illumination and ambient air rather than be independent from solar illumination or air.

For the foregoing reasons, the rejection of claims 8, 9 and 13, which depend from claim 1, should be withdrawn. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Rejection over Heller in view of Didillon

Claim 6 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Heller as applied to claim 5 above, and further in view of U.S. Patent No. 6,686,309 ("Didillon"). This rejection is respectfully traversed.

As discussed above, Heller does not teach or suggest a system of photosynthetically active microorganisms and luminous bacteria in a biological solution where the photosynthetically active microorganisms and the luminous bacteria interact as recited in claim 1. The Patent Office relied on Didillon as allegedly teaching that the ceramic surface used is a tile. However, even if Heller were to have been combined with Didillon as alleged by the Patent Office, the presently claimed subject matter still would not have been achieved because Didillon does not remedy the deficiencies of Heller. Specifically, Didillon also does not teach or suggest a system of photosynthetically active microorganisms and luminous bacteria in a biological solution where the photosynthetically active microorganisms and the luminous bacteria interact as recited in claim 1.

For the foregoing reasons, Applicant respectfully submits that Heller and Didillon, alone or in combination, would not have led one of ordinary skill in the art to claims 1 and 6.

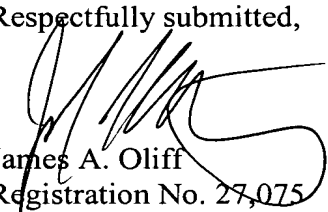
Reconsideration and withdrawal of this rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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